

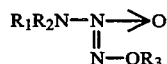
ASHP "Handbook on Injectable Drugs", 4th edition, by Trissel, pages 622-630, which lists commercially available intravenous infusion solutions; these pages are incorporated by reference.) The compounds may also be formulated as inclusion complexes, such as, for example, cyclodextrin inclusion complexes, or the compounds may be carried within liposomes. Preferred pharmaceutical carriers for injection are phosphate buffered saline, 5% dextrose, and sterile water. Oral administration may also be by standard methods well known to those with ordinary skill in the art, such as capsules, tablets or ingestible liquids utilizing excipients generally used for such purposes (e.g., cornstarch, microcrystalline cellulose, PVP, lactose, stearic acid, purified water U.S.P., and the like).

When the compounds of the present invention are administered to a patient in need thereof, it is thought that a suitable dosage for lowering blood pressure in a patient is from about 0.01 to 100 mg/kg (preferably about 0.1 to 50 mg/kg) of the patient's body weight, regardless of the route of administration or the exact cardiovascular disorder encountered. Administration of such dosages from one to eight times daily (preferably one to four times daily) is contemplated. In order to provide such dosages of the Formula I compounds, it is considered advantageous that solid or liquid unit dosage forms containing about 0.01 to 30 mg (preferably 0.1 to 15 mg) of one of the Formula I compounds be administered to a patient in need thereof from 1 to 8 times daily (preferably from one to four times daily).

The invention being thus described, it will be obvious that the same may be varied in many ways. Such variations are not to be regarded as a departure from the spirit and scope of the invention, and all such modifications as would be obvious to one skilled in the art are intended to be included within the scope of the following claims.

What is claimed is:

1. A pharmaceutical composition, comprising: an effective amount of a compound of the formula:

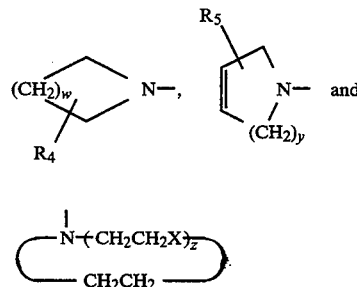


wherein:

R₁ and R₂ are the same or different and are selected from the group consisting of:

- C₁₋₁₂ straight chain alkyl,
- C₁₋₁₂ straight chain alkyl substituted by alkoxy or acyloxy,
- C₂₋₁₂ straight chain alkyl substituted by hydroxy or halo,
- C₃₋₁₂ branched chain alkyl,
- C₃₋₁₂ branched chain alkyl; substituted by hydroxy, alkoxy, acyloxy or halo,
- C₃₋₁₂ straight chain olefinic,
- C₃₋₁₂ straight chain olefinic substituted by hydroxy, alkoxy, acyloxy, halo or benzyl,
- C₃₋₁₂ branched chain olefinic, and
- C₃₋₁₂ branched chain olefinic substituted by hydroxy, alkoxy, acyloxy, halo or benzyl; or

R₁ and R₂ join together with the nitrogen atom to which they are bonded to form a heterocyclic ring selected from the group consisting of:



wherein w is 1 to 12, y is 1 or 2, z is 1 to 5, X is NH or O,

R₄ is hydrogen, C₁₋₈ straight chain alkyl, C₃₋₈ branched chain alkyl, C₃₋₈ cycloalkyl, or unsubstituted or substituted aryl, and R₅ is hydrogen, C₁₋₆ straight chain alkyl or C₃₋₆ branched chain alkyl; and

R₃ is selected from the group consisting of
 C₁₋₁₂ straight chain alkyl,
 C₁₋₁₂ straight chain alkyl substituted by hydroxy, alkoxy, acyloxy or halo,
 C₃₋₁₂ branched chain alkyl,
 C₃₋₁₂ branched chain alkyl substituted by hydroxy, alkoxy, acyloxy or halo,
 C₂₋₁₂ straight chain olefinic,
 C₂₋₁₂ straight chain olefinic substituted by hydroxy, alkoxy, acyloxy or halo,
 C₃₋₁₂ branched chain olefinic,
 C₃₋₁₂ branched chain olefinic substituted by hydroxy, alkoxy, acyloxy or halo,
 C₁₋₁₂ acyl, a sulfonyl derivative, a sulfinyl derivative, and a sulfenyl derivative; or

R₃ is a group of the formula $-(CH_2)_n-ONN-(O)NR_1R_2$, wherein n is an integer of 2-8, and R₁ and R₂ are as defined above;

with the proviso that at least one of R₁, R₂ and R₃ is an olefinic group or heteroatom-substituted straight or branched chain alkyl group or olefinic group as recited above; and with the further proviso that R₁, R₂ and R₃ do not contain a halo or a hydroxy substituent α to an oxygen or a nitrogen atom; and a pharmaceutically acceptable carrier therefor.

2. A pharmaceutical composition as recited in claim 1, wherein said composition is an injectable composition, and said pharmaceutically acceptable carrier is sterile.

3. A pharmaceutical composition as recited in claim 1, wherein said composition is in the form of a tablet, capsule or an ingestible liquid.

4. A pharmaceutical composition as recited in claim 1, wherein the composition comprises from about 0.01 to 30 mg of the compound of Formula I.

5. A pharmaceutical composition as recited in claim 1, wherein:

R₁ and R₂ are the same or different and are selected from the group consisting of:

- C₁₋₁₂ straight chain alkyl,
- C₁₋₁₂ straight chain alkyl substituted by alkoxy or acyloxy,
- C₂₋₁₂ straight chain alkyl substituted by hydroxy or halo,
- C₃₋₁₂ branched chain alkyl,
- C₃₋₁₂ branched chain alkyl substituted by hydroxy, alkoxy, acyloxy or halo,